

Remarks/Arguments:

Claims 1-24 were pending in the application at the time of the Office Action. Claims 2-5 and 18-24 are withdrawn from consideration as directed towards non-elected species of the invention. Claims 1, 15, 16, 21, 22, and 24 have been amended to recite that at least 4 pphp of the blowing agent enhancer is present. New claims 25-30 are added, further narrowing the range of blowing agent enhancer content. Support for these amendments can be found in paragraph [0026] of the application as filed.

Rejections under 35 U.S.C. § 102

Claims 1, 6, 13, 14, 16, 21, 22 and 24 are rejected under 35 U.S.C. § 102(b) as anticipated by Blum et al. (4,581,432). The applicant submits that this rejection is rendered moot in view of the accompanying amendments requiring that the blowing agent enhancer (e.g., ethylene glycol monobutyl ether) be present at a level of at least 4 pphp. Blum mentions ethylene glycol monobutyl ether only in Examples 3 and 5, where that compound is present at levels of 1.2 pphp [i.e., $2/168$] and 3.2 pphp [i.e., $4.5/(88.7+50)$], respectively. (It will be recalled that the term "pphp" refers to "parts per hundred parts polyol", as noted at [0017] in the specification.) Thus Blum fails to provide at least 4 pphp of blowing agent enhancer and therefore does not provide all of the limitations of claims 1, 6, 13, 14, 16, 21, 22 and 24. Accordingly, these claims are not anticipated, and the rejection should be withdrawn.

Rejections under 35 U.S.C. § 103

Claims 1, 6-17 and 21-24 are rejected under 35 U.S.C. § 103(a) as unpatentable over Blum et al. (4,581,432) in view of Bogdan et al. (6,086,788). The applicant submits that the above amendments have overcome this rejection because, even when combined, Blum and Bogdan fail to teach or suggest a blowing agent enhancer present at a level of at least 4 pphp. Blum discloses the use of ethylene glycol monobutyl ether only in the role of a solvent, or carrier, for the catalyst (triethylenediamine). See Examples 3 and 4, in both of which Blum refers to the catalyst being "dissolved in" the ethylene glycol monobutyl ether. Blum provides no hint that the ethylene glycol monobutyl ether serves, or can serve, any purpose other than

as a solvent, and thus there would be no motivation to modify Blum's disclosure to specify that which it does not disclose, namely, providing at least 4 parts of ethylene glycol monobutyl ether (or any other blowing agent enhancer) per hundred parts of polyol. Applicant notes that Blum does not indicate that either the type or the amount of solvent used for the catalyst is of any particular relevance, and certainly does not indicate in any way that it is a result-effective variable. Thus, any potential obviousness rejection based on the premise that specifying at least 4 pphp of ethylene glycol monobutyl ether would be "mere optimization" would also be improper, since "A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation." In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977).

Bogdan does not remedy these deficiencies in Blum, because she fails to teach the use of ethylene glycol monobutyl ether (or any other blowing agent enhancer) at all. Rather, Bogdan teaches that three very specific compounds, none of which is a blowing agent enhancer according to the claims, may be used as follows:

The invention relates to the addition of α -methyl styrene, isobutanol and/or isopropanol to reduce vapor pressure, improve k-factor, enhance the solubility of the blowing agent in the premix and/or improve the processing characteristics of polyurethane and polyisocyanurate closed-cell foams prepared with a blowing agent comprising a hydrofluorocarbon selected from the group consisting of 1,1,1,3,3-pentafluoropropane, 1,1,1,2-tetrafluoroethane, 1,1,2,2-tetrafluoroethane, and mixtures thereof. [Bogdan, Abstract]

Thus, Bogdan does not teach the use of any amount of a blowing agent enhancer according to the present invention, much less 4 pphp of the enhancer. Accordingly, the combination of Blum with Bogdan fails to provide all of the elements of the present claims, and the rejection should be withdrawn.

Appl. No. 10/672,363

Double Patenting

Claims 1-24 are rejected on the ground of nonstatutory obviousness-type double patenting over claims 1-20 of U.S. Pat. No. 6,921,779. The Applicant will file an appropriate terminal disclaimer when the claims have been found allowable.

Conclusion

For all of the reasons recited above, the applicant submits that all of claims 1-30 are in condition for allowance, and respectfully request reconsideration and early notification to that effect. The applicant invites the Examiner to contact their undersigned representative, Michael Leach, by telephone if it appears that a telephonic interview may facilitate prosecution of the application.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Michael Leach", written in a cursive style.

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